REMARKS

The claims have been amended to more particularly claim the invention. In particular, for example, claim 1 was amended to incorporate the limitations of claim 9 and most of the limitation of claim 6, and the phrase substantially hydroxylamine-free was placed into the body of the claim, as opposed to the preamble, to clarify that this is a limitation of the claim. Additionally, the claim was amended to recite that the compositions are substantially fluoride-free, as described in paragraph [0116] in the specification.

Applicants acknowledge the Examiner's request for a terminal disclaimer over U.S. Patents 6,319,885; 6,492,311; 6,777,380; and 6,110,881, but respectfully requests that the Examiner reconsider the request in view of the amendments to the claims.

Claims 1-39 stand rejected as being anticipated by U.S. Patent 6,372,410. Applicants respectfully traverse in view of the amendments to the claims and to the arguments presented herein. With respect to independent claim 1, U.S. Patent 6,372,410 teaches an "aqueous solution containing 0.001 to 0.5% by weight of a fluorine compound and 50 to 99% by weight, particularly 81 to 99% by weight of an ether solvent", as described in column 2 at lines 11-4 of U.S. Patent 6,372,410. As shown in column 2 at line 61 to column 3 at line 6, by "fluorine compound" U.S. Patent 6,372,410 is referring to a fluoride compound. Claim 1, as amended, recites that the composition is substantially free of fluoride. For this first reason, applicants respectfully request that the rejection of claim 1 and to dependent claims 2-9 be reconsidered and withdrawn. The same argument is made for independent claims 10, 17, 23, and 30, all of which recite that the composition is substantially fluoride-free, as well as for claims depending therefrom. In addition, all of the aforementioned independent claims as amended recite N,N-diethylhydroxylamine. U.S. Patent 6,372,410 recites in column 3 at lines 1-2 that the required fluoride salt can be a salt of hydroxylamine or of dimethylhydroxylamine, but does not teach or suggest that N,N-diethylhydroxylamine may be a useful salt. With respect to independent claim 31, this claim is a "consisting essentially of" claim, and the requirement of a fluoride in the compositions of U.S. Patent 6,372,410 clearly brings the composition of claim 31 outside the scope of disclosure of U.S. Patent 6,372,410. The same argument is made for independent claims 32, 33, 34, 35, 36, 37, 38, and 39. In addition, the independent "consisting essentially of" claims 31 - 39 recite an alkanolamine but do not recite the presence of an ether solvent such as is

required by U.S. Patent 6,372,410. For the above reasons, applicants respectfully request reconsideration and withdrawal of the rejection over U.S. Patent 6,372,410.

Claims 1-39 stand rejected as being anticipated by U.S. Patent 5,798,323. Applicants respectfully traverse in view of the amendments to the claims and to the arguments presented herein. All of the pending claims recite a hydroxylamine derivative, most particularly N,N-diethylhydroxylamine. In contrast, U.S. Patent 5,798,323 not only does not describe a composition containing hydroxylamine but actively teaches against it. U.S. Patent 5,798,323 teaches on column 2 at lines 16-25 that

> "although hydroxylamine has a potential to enhance the stripability and/or the metal corrosion inhibitor, it is not stable upon heating. Therefore, the use of hydroxylamine is not recommended, especially when used in a highly alkaline medium. Accordingly, hydroxylamine is not suitable for use in stripping of photoresist films or cleaning of the post-etch residues at higher temperatures."

U.S. Patent 5,798,323 teaches on column 5 at lines 16-23 that

> "the non-corrosive stripping and cleaning composition of the present invention has four components, namely one or more selected polar solvents, one or more selected alkanolamine compounds, one or more selected corrosion inhibitors; and water. These four components must be present in certain percentages. Also, the present invention is preferably free of hydroxylamine compounds such as hydroxylamine or N,N-diethylhydroxylamine."

Indeed, the Examiner recited this second quotation of U.S. Patent 5,798,323 as the support for hydroxylamine in the Office Action. However, teaching against something, and stating the compositions do not contain something, would surely not teach or suggest to one of skill in the art to add the particular components being taught against! Indeed, for support for the corrosion inhibitors the Examiner points to the section in the "Brief Description of the Art, in particular column 3 at lines 15-22 which states "U.S. Pat. No. 5,563,119 to Ward discloses an aqueous

stripping composition that is essentially free of any hydroxylamine compounds. The composition is an aqueous mixture of an alkanolamine, tetraalkylammonium hydroxide, and an inhibitor. Useful inhibitors are disclosed to be catechol, pyrogallol, anthranilic acid, gallic acid, gallic esters, and the like." Applicants believe the prima facie case can be made which depends on a description of a particular prior art reference in the background section of the reference as disclosure of particular corrosion inhibitors, where the prior art is described as not containing hydroxylamine compounds, and is therefore also not pertinent to the claimed compositions (each of which claim a hydroxylamine compound). Additionally, with respect to the independent "consisting essentially of" claims 31 - 39 which recite an alkanolamine but do not recite the presence of any other solvent, Applicants again point to the quotation cited by the Examiner, that "one or more selected polar solvents, one or more selected alkanolamine compounds, one or more selected corrosion inhibitors; and water ... (m)ust be present in certain percentages." As the compositions claimed in the independent "consisting essentially of" claims 31 – 39 do not recite a polar organic solvent, Applicants maintain that the reference does not teach or suggest the claimed invention. For the above reasons, applicants respectfully request reconsideration and withdrawal of the rejection over U.S. Patent 5,798,323.

Claims 1-39 stand rejected as being anticipated by U.S. Patent 5,968,848. Applicants respectfully traverse in view of the amendments to the claims and to the arguments presented herein. The Examiner recites to the portion of this reference beginning with "Typical examples of hydroxylamines include hydroxylamine and N,N-diethylhydroxylamine." However, it is only the complete teaching that an Examiner can use, and not pieces selected and used out of context. U.S. Patent 5,968,848 actually teaches, at column 4 at lines 7-32, that:

> The above-described hydrofluorate remover solution contains a salt of a hydrofluoric acid and a metallic-ion-free base [ingredient (a)] as a principal ingredient, and is not especially limited so long as it contains such an ingredient (a) as a principal ingredient. ... Here, the metallic-ion-free base means a base which does not form a metallic-ion-containing solution when the base is dissolved in water, such as an organic amine,

> examples of which include hydroxyl amines, primary, secondary or tertiary aliphatic amines, alicyclic amines, aromatic amines, and heterocyclic amines; an aqueous ammonia; or a lower-alkyl quaternary ammonium base. ... Typical examples of hydroxylamines include hydroxylamine and N,N-diethylhydroxylamine. Typical examples of primary aliphatic amines include monoethanolamine, ethylenediamine, and 2-(2-aminoethylamino)ethanol. Typical examples of secondary amines include diethanolamine, dipropylamine, and 2-ethylaminoethanol.

That is, hydroxylamines are taught in U.S. Patent 5,968,848 only as being useful counterions for a fluoride salt. Claim 1, as amended, recites that the composition is substantially free of fluoride. As there is no fluoride, there is no reason for one skilled in the art to look to a composition that contains fluoride, and to select from the disclosure a particular compound (a hydroxylamine derivative) taught as being a counter-ion for a fluoride salt, and to include this counter-ion in a composition that comprises no fluoride. Additionally, the disclosure of alkanolamines is also limited to the use thereof as counter-ions for the fluoride salt, and again there is no reason for one skilled in the art to look to a composition that contains fluoride, and to select from the disclosure a particular compound (an alkanolamine) taught as being a counter-ion for a fluoride salt, and to include this counter-ion in a composition that comprises no fluoride. For these reasons, applicants respectfully request that the rejection of claim 1 and to dependent claims 2-9 be reconsidered and withdrawn. These same arguments are made for independent claims 10, 17, 23, and 30, all of which recite that the composition is substantially fluoride-free, as well as for claims depending there-from. With respect to independent claim 31, this claim is a "consisting essentially of" claim, and the requirement of a fluoride in the compositions of U.S. Patent 5,968,848 clearly brings the composition of claim 31 outside the scope of disclosure of U.S. Patent 5,968,848. The same argument is made for independent claims 32, 33, 34, 35, 36, 37, 38, and 39. In addition, the independent "consisting essentially of" claims 31 - 39 recite an alkanolamine but do not recite the presence of an organic solvent such as is required in all preferred embodiments of U.S. Patent 5,968,848 (in column 4 at lines 11-15 and at column 5 at

lines 13-25. For the above reasons, applicants respectfully request reconsideration and withdrawal of the rejection over U.S. Patent 5,968,848.

Claims 1-39 stand rejected as being anticipated by U.S. Patent 6,068,000. Applicants respectfully traverse in view of the amendments to the claims and to the arguments presented herein, and for the Examiner's convenience point out that the argument presented herein is identical to the argument presented immediately above with respect to U.S. Patent 5,968,848. The Examiner recites to the portion of this reference beginning with "Typically, examples of hydroxylamines include hydroxylamine and N,N-diethylhydroxylamine." However, it is only the complete teaching that an Examiner can use, and not pieces selected and used out of context. U.S. Patent 6,068,000 actually teaches, at column 4 at lines 37-60, that:

> The aforementioned hydrofluoric acid-based remover solution principally contains a salt [ingredient (a)] derived from hydrofluoric acid and a metal-free base. In other wards *(sp)*, the hydrofluoric acid-based remover solution is not especially limited so long as it principally contains such an ingredient (a). A neutral remover solution for resists is preferred, which contains a water-soluble organic solvent [ingredient (b)] and water [ingredient (c)] in addition to the ingredient (a), and has a pH value falling within a range of 5 to 8. The aforementioned metal-free base is a base which contains no metallic element within its molecular structure, and examples of such bases include organic amines such as hydroxylamines, primary, secondary or tertiary aliphatic amines, alicyclic amines, aromatic amines, and heterocyclic amines; aqueous ammonia; and quaternary lower alkyl ammonium bases. Typically, examples of hydroxylamines include hydroxylamine and N,N-diethylhydroxylamine; examples of primary aliphatic amines include monoethanolamine, ethylenediamine, and 2-(2-aminoethylamino)ethanol; examples of secondary aliphatic amines include diethanolamine, dipropylamine, and 2-ethylaminoethanol; examples of

tertiary aliphatic amines include dimethylaminoethanol, and ethyldiethanolamine.

That is, hydroxylamines are taught in U.S. Patent 6,068,000 only as being useful counter-ions for a fluoride salt. Claim 1, as amended, recites that the composition is substantially free of fluoride. As there is no fluoride, there is no reason for one skilled in the art to look to a composition that contains fluoride, and to select from the disclosure a particular compound (a hydroxylamine derivative) taught as being a counter-ion for a fluoride salt, and to include this counter-ion in a composition that comprises no fluoride. Additionally, the disclosure of alkanolamines is also limited to the use thereof as counter-ions for the fluoride salt, and again there is no reason for one skilled in the art to look to a composition that contains fluoride, and to select from the disclosure a particular compound (an alkanolamine) taught as being a counter-ion for a fluoride salt, and to include this counter-ion in a composition that comprises no fluoride. For these reasons, applicants respectfully request that the rejection of claim 1 and to dependent claims 2-9 be reconsidered and withdrawn. These same arguments are made for independent claims 10, 17, 23, and 30, all of which recite that the composition is substantially fluoride-free, as well as for claims depending there-from. With respect to independent claim 31, this claim is a "consisting essentially of" claim, and the requirement of a fluoride in the compositions of U.S. Patent 6,068,000 clearly brings the composition of claim 31 outside the scope of disclosure of U.S. Patent 6,068,000. The same argument is made for independent claims 32, 33, 34, 35, 36, 37, 38, and 39. In addition, the independent "consisting essentially of" claims 31 - 39 recite an alkanolamine but do not recite the presence of an organic solvent such as is required in all preferred embodiments of U.S. Patent 6,068,000 (in column 4 at lines 42-46 and at column 5 at lines 45-59. For the above reasons, applicants respectfully request reconsideration and withdrawal of the rejection over U.S. Patent 6,068,000.

Claims 1-39 stand rejected as being anticipated by U.S. Patent 6,218,087. Applicants respectfully traverse in view of the amendments to the claims and to the arguments presented herein. The pertinent disclosure of U.S. Patent 6,218,087 can be found in column 6, lines 23-63.

U.S. Patent 6,218,087 at column 6 at lines 23-25 describes a composition containing an oxide of an aromatic hydroxyl compound, where the aromatic hydroxyl compound can include (as recited in U.S. Patent 6,218,087 at column 5 lines 1-10): "phenol, cresol, xylenol, pyrocatechol(=1,2-dihydroxybenzene), tertbutylcatechol, resorcinol, hydroquinone, pyrogallol, 1,2,4-benzenetriol, p-hydroxybenzyl alcohol, o-hydroxybenzyl alcohol, p-hydroxyphenethyl alcohol, p-aminophenol, m-aminophenol, diaminophenol, aminoresorcinol, p-hydroxybenzoic acid, o-hydroxybenzoic acid, 2,4-dihydroxybenzoic acid, 2,5-dihydroxybenzoic acid, 3,4-dihydroxybenzoic acid(.dbd.protocatechuic acid), 3,5-dihydroxybenzoic acid and gallic acid." U.S. Patent 6,218,087 in column 8 at lines 56-67 also describes numerous carboxylic acids that are useful. However, the particular class of compounds recited in claims 6 and 12 are not disclosed or suggested in U.S. Patent 6,218,087. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 6 and 12 over U.S. Patent 6,218,087.

New claims 40 and 41 recite that the alkanolamine is 2-(2-aminoethylamino)-ethanol. Support for this claim can be found from original claims 9 and 26.

As quoted by the Examiner, U.S. Patent 6,218,087 in column 6 at lines 46-51 teaches "Specific examples of the hydroxylamine include hydroxylamine (NH_2OH), N-methylhydroxylamine, N,N-dimethylhydroxylamine and N,N-diethylhydroxylamine, among which hydroxylamine (NH_2OH) is preferred. These hydroxylamines may be used either independently or in combination with themselves." U.S. Patent 6,218,087 is teaching a revised version of a remover, where the new recitation is of the improved optical clarity and reduced corrosion afforded by partially oxidizing the corrosion inhibitor. The disclosure of this patent is remarkably similar to the disclosure of the Applicants own patents, to which the Examiner has requested a terminal disclaimer. Indeed, one of the Examples in U.S. Patent 6,218,087 recites ingredients in one of Applicants commercial products. In those patents, hydroxylamine is also preferred.

Applicants surprisingly found, however, that compositions containing N,N-diethylhydroxylamine provided greater protection against corrosion for certain metals than did the compositions containing hydroxylamine. See, e.g., paragraph [0159] which states that

replacing N,N-diethylhydroxylamine ("DEHA") with hydroxylamine increases the etch (corrosion) rate. See Examples 27-28 in paragraphs [0207] and [0208], and tables IV and V on page 48 of the instant disclosure for a comparison of remover compositions comprising hydroxylamine versus N,N-diethylhydroxylamine. Surprisingly, as stated in paragraph [0208], the composition containing N,N-diethylhydroxylamine performed better than the composition containing hydroxylamine for every metal, but most notably for copper. See also Examples 29-33 in paragraphs [0209] to [0220], where in comparative examples the compositions containing N,N-diethylhydroxylamine performed better than similar compositions containing hydroxylamine. This surprising result sets apart the instant invention as claimed in independent claims 1, 10, 17, 23, and 30 from the invention disclosed in U.S. Patent 6,218,087.

With respect to claims 3 and 30 which recites that the composition is substantially water-free, U.S. Patent 6,218,087 teaches compositions that contain water. See for example column 6 at lines 51-63 which states:

> "These hydroxylamines intrinsically contain water but, if desired, extra water may be added to adjust the concentration and stripping property of the composition. The aromatic hydroxyl compound and its oxide are preferably contained in the stripper composition in an amount of 2-20 wt %, more preferably 5-15 wt %, as calculated for the aromatic hydroxyl compound. The amine having pKa of 7.5-13 in aqueous solution at 25.degree. C. is preferably contained in the stripper composition in an amount of at least 2 wt %, more preferably at least 5 wt %. The hydroxylamine is preferably contained in the stripper composition in an amount of 2-30 wt %, more preferably 5-25 wt %. The balance is water."

For this reason Applicants respectfully request the Examiner reconsider the rejection of claims 3 and 30 as being anticipated by U.S. Patent 6,218,087.

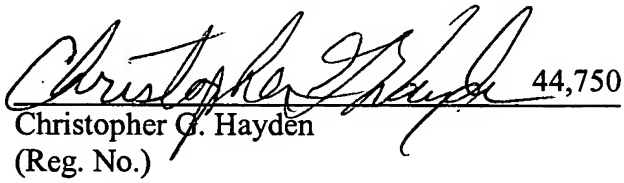
With respect to independent claim 31, this claim is a "consisting essentially of" claim, and the requirement of an oxide of an aromatic hydroxyl compound in the compositions of U.S. Patent 6,218,087 clearly brings the composition of claim 31 outside the scope of disclosure of

U.S. Patent 6,218,087. The same argument is made for independent claims 32, 33, 34, 35, 36, 37, 38, and 39. The criticality of the oxide of the aromatic hydroxyl compound is shown in at column 5 at lines 18-21 which states "Incorporating the aromatic hydroxyl compounds in oxide form is preferred since it contributes to maintaining the CIE 1976 L*a*b* color difference (.DELTA.E*.sub.ab) in the high range specified by the invention." Indeed, this patent offered no other way to achieve the "improvement" claimed therein. As the compositions of U.S. Patent 6,218,087 require an oxide of an aromatic hydroxyl compound, and the claims 31-39 recite compositions not including this component, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 31-39 over U.S. Patent 6,218,087.

No fee is believed to be due for this submission, since this Information Disclosure Statement is being submitted before the first Office Action. Should any fees be required, however, please charge the required fees to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310.

Respectfully submitted,

Date September 26, 2005
(Filed Monday after Saturday due date)



44,750
Christopher G. Hayden
(Reg. No.)

Customer Number 009629
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
202-739-3001 (facsimile)